



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#9 argument

In re application of

Dale E. Fiene

011,024

Examiner J. D. Jackson
Group Art Unit 268

R. Logan

11-15-88

Filed: February 5, 1987

Attorney Docket No. 635 P 004

For: A.C. POWERED SMOKE DETECTOR
WITH BACK-UP SUPERVISION
CIRCUIT

RECEIVED

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GROUP 260

RESPONSE

The Office Action dated July 6, 1988 on the above-identified application has been received and carefully noted. Claim 15 of the present Application has been rejected as being anticipated by Schneider, et al., while Claims 16-18 have been objected to as being dependent upon Claim 15. Applicant respectfully traverses this rejection in view of the following remarks:

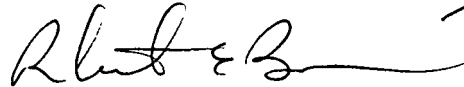
In the subject invention, the battery is disconnected from supplying power to the detector by means of an isolation diode. This battery is tested by a momentary loading with a heavy loading resistance, or test load, which is designated by #36 in Figure 1A and by #74 in Figures 1B and 2. The test load is activated by a test load switch, which can be activated manually or automatically by, for example, an oscillator circuit. This test load switch also acts to disconnect the D.C. power supply to the system. At this point, the isolation diode becomes forwardly biased to provide power from the battery to the circuit. A voltage comparator compares this battery voltage to a preselected minimum, and activates an alarm if it falls below this minimum.

Schneider Patent No. 4,138,670 discloses an AC powered smoke alarm that has a continuous battery supervision circuit which uses a meter to measure the open circuit. Schneider clearly does not suggest the use of a test load to test the battery. In Schneider's Figure 1, the resistors 102, 104, and 106 do not comprise a "test load." Rather, this string of resistors is used for the sole purpose of continuously sensing the voltage level of the battery. Potentiometer 102 is in series with resistors 104 and 106 across the battery and is designed so that the voltage at a slider varies directly with the battery voltage.

In the Schneider patent, zener diode 98 is in series with resistor 100, and generates a reference potential. Programmable unijunction transistor (PUT) 108 is located so that it is able to compare this reference voltage with the voltage across potentiometer 102, which corresponds to the battery voltage. When the PUT detects the battery voltage reaching a certain level, the PUT becomes conductive and triggers an alarm. Therefore, the Schneider patent teaches a method of detecting low battery voltage levels using a large resistance that minimizes the load on the battery and is able to sense the battery voltage. Thus, it is the opposite of a test load. The Schneider patent also does not teach a battery voltage detection system wherein the battery is tested across the system. The subject invention thus gives a more accurate determination of when the battery voltage is at an inadequate level. Therefore, the Schneider patent does not anticipate Claim 15 of the subject invention.


For the above reasons, it is believed that the Claim 15 is allowable and Claims 16-18 are not objectionable. If the Examiner has any questions, she is requested to call Applicant's undersigned counsel directly.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D. C. 20231, on Nov 7, 1988

 11/7/88
Robert E. Browne, Reg. 26,150 DATE